

Students' mental health: Personal and university determinants

Siamak Khodarahimi, Ali Rasti, Malihe Khajehie, Rea Sattar
(Islamic Azad University, Fars 71896-55774, Iran)

Abstract: The present study was to examine the effects of personal and university bounded factors in students mental health in north of Fars province, Iran. The effects of these factors on university students' psychopathology within a survey design were investigated among 300 participants—94 males and 206 females, who were selected through random sampling method and the degrees of their mental health, were measured by SCL-90-R checklist. Overall findings supported that gender, marital status, socioeconomic status as personal factors, and type of university as within university factor would influence students' mental health. So males, married, and students with moderate and high socioeconomic status had more significant better mental health situation than females, singles and those with low socioeconomic status. Finally, ethnicity, dormitory and non-dormitory residence, native or non-native being, discipline, school and faculty, and academic performance variables were not effective on students' mental health significantly. Here, it was suggested an explanatory triangle model for university students' mental health explanation with respect to gendered and socio-cultural contexts and their implications in clinical and educational settings.

Key words: students; mental health; university; personal; SCL-90-R

1. Introduction

Higher education and universities are considered as an innovative and intellectual production centers for mankind scientifically. However its main agents for any knowledge reproduction are human resources like members of scientific board, employees and students rather than the physical and technological facilities. Hence, investigation for human mental health recognition at universities is crucial and essential because of their principal roles in all countries development globally. Moreover, the universities mainly concerned to education, training, and knowledge and science transition for students that serves as future labor force in anywhere. From organizational perspective, higher education aims to help students to actualize their talents and potentials to succeed in educational endeavors and throughout their lives (Akhavan & Dehghan, 2006). But it is dependent to university students' capabilities and their healthy atmosphere exclusively which require to emphases on their mental health in higher education. Therefore, mental health problems in students may be seriously disruptive to their education and emotional development, and sometimes for universities, educational institutions and other society segments.

Historically, a report by the Association for University and College Counseling (AUCC, 1999) entitled *Degrees of Disturbance: The New Agenda* has been particularly influential in drawing attention to an apparent increase in levels of psychological disorder among higher education students. At now, there is a huge of evidence

Siamak Khodarahimi, Ph.D., Islamic Azad University; research field: clinical psychology.

Ali Rasti, M.S., Islamic Azad University; research field: clinical psychology

Malihe Khajehie, M.S., Islamic Azad University; research field: English language teaching.

Rea Sattar, Ph.D., Islamic Azad University; research field: philosophy of education.

that suggests mental health problems are numerous and increasing among students in higher education which the majority of young adults attend (Gately, 2005; U.S. Department of Education, 2005). In a 2005 national survey of college counseling center directors, 86 percent reported an increase in severe psychological problems among students (Gallagher, 2005). However, there is a lack of worldwide evidence about of potential risk factors of mental health within student populations in higher education, especially in Iran. However, much of the literature on risk factors among students has been focused on substance-related disorders (Brenner, Hassan, & Barrios, 1999), suicide (Silverman, Meyer, Sloane, Raffel & Pratt, 1997), gender identity disorders (Zulhizzam, 2005), sexual victimization and sexual identity or problematic relationships (Kisch, Leino & Silverman, 2005), and lower socioeconomic status outcomes (YU & Williams, 1999; Roberts, Golding, Towell & Weinreb, 1999). Really, it seems that students' mental health correlated with their autonomy, security and personal output in university settings (Lieberman, 2001; Partenheimer, 2003). Otherwise, studies indicated that mental health problems among university students are mostly influential in their academic success (Mousavi, 1993; Yaghoobi, 1997). Another voice indicated an additive trend in prevalence of academic, family, and psychological problems in university students in country (Kafi, Bolhari & Peiravi, 1994). Theoretically, it suggested that there is a socio-cultural and demographical explanation for university students' mental health (Khodarahimi, 1995; Najarian et al., 1998; Shamlo, 1996). Findings indicated that gender, life events, marital status and socioeconomic state factors have major effects on individuals' mental health among university students in Iran (Shamlo, 1997; Qrdobadi, 1985; Milanifar, 1994). Since mental health issues among students in distance learning and non-profit universities ignored whereas they are a major part of higher education now. Therefore, we hypothesized that personal factors such as gender, marital status, socio-economic status, ethnicity, and native or non-native being are influential on students' mental health. Also, we hypothesized that within university characteristics like type of university, dormitory and non-dormitory residence, discipline, school or faculty, and academic performance are effective on their mental health. Hence main objection of present study will to examine the effects of individual's bounded and within university factors on university students' mental health in Payam-Nour University—Abadeh Center, Payam-Nour University—Bavanat Center and Islamic Azad University—Eghlid Branch, in the north of Fars province. Both of the Payam-Nour University—Abadeh and the Payam-Nour University—Bavanat Centre as distance learning centers were directed and managed by Payam-Nour University policies that are under vision of the Ministry for Sciences, Research and Technology (MSRT). While the Islamic Azad University—Eghlid Branch as an in-campus centre is a non-profits university and was managed by Islamic Azad University (IAU) policies that is independent of the MSRT. Personal bounded contexts and its contributions on students' mental health within university-based policies and backgrounds, hence, we suggest that there are significant differences among them too.

2. Method

2.1 Subjects

Present study population included all of university students in Abadeh Payam-Nour University, Bavanat Payam-Nour University and Islamic Azad University—Eghlid Branch which located in Abadeh, Bavanat and Eghlid cities respectively, at the north of Fars province. Based on Line's (1978) table for estimating of sample size from population, subjects were 300 university students that selected by random sampling method from Payam-Nour University—Abadeh Center (N=130), Payam-Nour University—Bavanat Center (N=70) and Islamic

Azad University—Eghlid Branch (N=100) campuses. It included 94 males and 206 females overall that their majority were youth. Male and female students were randomly selected from different disciplines and faculties that include both of dormitory and non-dormitory residential students in each campus. All subjects were spent one or more years of their academic programs in university. In addition, study samples were involved both native and non-native students too.

2.2 Materials

Research instruments consisted of two inventories. One of them was developed in present study for demographic variables that named personal information sheet. For guarantee of data confidentiality as a part of research ethics, in personal sheet we did not address to participant's name and surname. The second one was SCL-90-R to assess mental health and psychopathology. Although there was no earlier evidence for SCL-90-R application in psychopathology assessment, we used it for several reasons. First, it was used because the lack of reliable and valid scale for psychopathology measurement in this country. Second, it was time-cost benefit for both respondents and investigators. Third, it had potential capability to be applied as a semi-structured interview among individuals in subcultures. Fourth, almost all components in SCL-90-R were correspondent with our earlier impressions and observations about common mental health problems among women, clinically. For instance, many cases refused psychological services because of cultural contexts, especially labeling and stigmatization, but one could easily identify their clinical symptoms by SCL-90-R. SCL-90-R invented by Derogatis in 1977. SCL-90-R consisted of 90 items including somatization (12 items), obsessive-compulsive (9 items), anxiety (10 items), interpersonal sensitivity (9 items), aggression (6 items), phobia (7 items), paranoid (6 items), psychosis (10 items), and atypical (7 items) factors (Cyr, McKenna-Foley & Peacock, 1985). In addition, it had a total scale score index. SCL-90-R reliability was confirmed by Derogatis in 1976. SCL-90-R reliability was fluctuated from $r=0.90$ for depression factor as the highest and $r=0.77$ as the least for psychosis factors. SCL-90-R validity with MMPI was the highest rate for depression ($r=0.73$) and the lowest one ($r=0.36$) for phobia factors. SCL-90-R was standardized for Iranian population and its validity and reliability was confirmed, too (Farjad, 2001). In a recent study, Marashi (1995) reported SCL-90-R reliability by internal consistency alpha as follows: somatization ($\alpha=0.84$), obsessive-compulsive ($\alpha=0.91$), interpersonal sensitivity ($\alpha=0.82$), depression ($\alpha=0.93$), anxiety ($\alpha=0.86$), aggression ($\alpha=0.90$), phobia ($\alpha=0.83$), paranoid ($\alpha=0.81$), psychosis ($\alpha=0.84$) and total scale ($\alpha=0.98$).

2.3 Design and procedure

This study was a survey design. Dependent variable was university students' mental health with 10 factors that indicated their psychopathology indices. Independent variables were gender, marital status, socio-economic status, registered university for education, ethnicity, dormitory and non-dormitory residential location, native or non-native being, discipline and faculty, and academic performance. Finally, their informed consent for participation on investigation were confirmed and all of them completed SCL-90-R and demographical sheet individually.

3. Results

We hypothesized that personal factors such as gender, marital and socioeconomic status, ethnicity, and native or non-native being are effective on university students' mental health. Here, the effect of gender on students' mental health was calculated by t-test for independent groups for 206 females and 94 males that is significant differences in depression ($t_{298}=2.49$, $p=0.01$), interpersonal sensitivity ($t_{298}=2.07$, $p=0.03$), phobia ($t_{298}=2.07$,

$p=0.03$) and total mental health ($t_{298}=1.89$, $p=0.05$) factors. However, female students were more disturbed in depression, interpersonal sensitivity, phobia and total psychopathology than males (Table 1). Also, the effect of marital status on students' mental health was calculated by t-test for independent groups for 257 single and 43 married subjects that is only significant for depression ($t_{298}=3.12$, $p=0.002$) only, and females had more disorder than males (Table 2). In addition, the effect of students' socioeconomic status on their mental health was analyzed by ANOVA. This analysis indicated that students' socioeconomic status was effective on their phobia ($F_{3, 297}=3.700$, $p=0.005$) exclusively. Now, group differences by Duncan test indicated students with very low ($M=11.10$, $SD=7.28$) and low ($M=8.93$, $SD=7.05$) socioeconomic status had more significant phobias than ones with high ($M=3.40$, $SD=3.42$) and very high ($M=1.22$, $SD=10.15$) socioeconomic status (Table 3). Here, the effect of ethnicity on students' mental health was calculated by ANOVA method that was not significant. However, the effect of native or non-native being on students' mental health was analyzed by t-test for independent groups which indicated any significant differences too.

Table 1 Gender and university students' mental health

Factors	Groups				t	p
	Female		Male			
	M	SD	M	SD		
Aggression	5.48	4.53	4.12	3.52	1.22	0.22
Anxiety	10.22	7.98	8.68	8.01	1.85	0.06
Depression	23.29	11.58	20.28	8.57	2.49	0.01*
Interpersonal sensitivity	9.20	6.74	7.84	4.59	2.07	0.03*
Obsessive compulsive	10.42	6.68	9.73	6.12	0.87	0.38
Paranoia	6.85	5.14	6.39	3.47	0.88	0.37
Phobia	3.78	2.02	2.92	1.84	2.07	0.03*
Psychosis	7.87	6.86	7.59	4.75	0.42	0.67
Somatization	9.52	6.88	8.34	5.99	1.58	0.11
Total scale	86.75	21.64	77.22	23.77	1.89	0.05*

Table 2 Marital status and students mental health

Factors	t	p	Factors	t	p
Aggression	0.26	0.79	Paranoia	0.82	0.41
Anxiety	0.18	0.86	Phobia	0.52	0.60
Depression	3.21	0.002*	Psychosis	1.82	0.07
Interpersonal sensitivity	0.60	0.54	Somatization	1.65	0.10
Obsessive compulsive	0.30	0.97	Total scale	0.86	0.38

Table 3 Socioeconomic status and university students' mental health

Factors	F	P	Factors	F	p
Aggression	1.450	0.217	Paranoia	0.648	0.628
Anxiety	1.140	0.337	Phobia	3.700	0.005
Depression	1.737	0.141	Psychosis	1.049	0.204
Interpersonal sensitivity	2.086	0.082	Somatization	1.061	0.375
Obsessive compulsive	1.303	0.267	Total Scale	1.568	0.182

Secondly we hypothesized there are significant differences among students mental health with respect to

within university factors such as type of university, dormitory and non-dormitory residence, discipline, school and faculty, and academic performance. Here, the effect of type of university on students' mental health was analyzed by ANOVA between Abadeh Payam-Nour, Bavanat Payam-Nour and the Islamic Azad University—Eghlid Branch campuses. Findings indicated that students' mental health between universities were different significantly in somatization ($F_{2,298}=3.700$, $P=0.005$), obsessive-compulsive ($F_{2,298}=3.700$, $P=0.005$), depression ($F_{2,298}=4.8426$, $P=0.003$), anxiety ($F_{2,298}=3.4617$, $P=0.03$), aggression ($F_{2,298}=9.5870$, $P=0.0001$), phobia ($F_{2,298}=3.3836$, $P=0.03$), paranoid ($F_{2,298}=5.7307$, $P=0.003$), psychosis ($F_{2,298}=5.1842$, $P=0.006$) and total mental health ($F_{2,298}=6.7056$, $P=0.001$) factors (Table 4). Duncan test for groups differences revealed that Payam-Nour University- Bavanat Center ($M=12.04$, $SD=7.38$) and Islamic Azad University—Eghlid Branch ($M=11.03$, $SD=7.39$) students had more significant somatization than Payam-Nour University—Abadeh Center ($M=6.02$, $SD=4.44$) students. In obsessive-compulsive factor, Bavanat Payam-Nour ($M=9.46$, $SD=6.44$) and Islamic Azad University—Eghlid Branch ($M=11.47$, $SD=7.01$) had significant pathology than Payam-Nour University—Abadeh Center ($M=8.02$, $SD=5.14$) students. Also, Payam-Nour University—Bavanat Center ($M=24.55$, $SD=8.90$) and Islamic Azad University—Eghlid Branch ($M=24.68$, $SD=7.33$) had significant more depression than Payam-Nour University—Abadeh Center ($M=4.79$, $SD=2.02$) students. However, Payam-Nour University—Bavanat Center ($M=10.73$, $SD=7.11$) and Islamic Azad University—Eghlid Branch ($M=11.16$, $SD=7.52$) had significant higher anxiety than Payam-Nour University—Abadeh Center ($M=6.20$, $SD=3.15$) students too. In psychosis factor, Payam-Nour University—Bavanat Center ($M=8.06$, $SD=3.60$) and Islamic Azad University—Eghlid Branch ($M=9.15$, $SD=3.84$) had more significant disturbance than Payam-Nour University—Abadeh Center ($M=4.28$, $SD=2.11$) students. Finally, Payam-Nour University—Bavanat Center ($M=90.36$, $SD=32.26$) and Islamic Azad University—Eghlid Branch ($M=97.55$, $SD=32.14$) had more significant total psychopathology Payam-Nour University—Abadeh Center ($M=75.16$, $SD=20.11$) students. Overall, Payam-Nour University—Bavanat Center and Islamic Azad University—Eghlid Branch students had more significant somatization, obsessive compulsive, depression, anxiety, psychosis and psychopathology than Payam-Nour University—Abadeh Center ones. Furthermore, the effects of ethnicity, discipline, school and faculty, and academic performance variables on students' mental health were calculated by ANOVA method that were not effective in any cases significantly. Ultimately, the effects of dormitory and non-dormitory residential location on students' mental health were analyzed by t-test for independent groups which indicated any significant differences too.

Table 4 Students' mental health between Payam-Nour University—Abadeh Center, Payam-Nour University—Bavanat Center and Islamic Azad University—Eghlid Branch

Factor	F	p	Factor	F	p
Aggression	9.5870	0.0001	Paranoia	5.7307	0.003
Anxiety	3.4617	0.03	Phobia	3.3836	0.03
Depression	4.8426	0.003	Psychosis	5.1842	0.006
Interpersonal sensitivity	2.7508	0.008	Somatization	5.7432	0.003
Obsessive compulsive	2.9464	0.06	Total scale	6.7056	0.001

4. Discussion

Initially, in agreement with our hypothesis, findings supported the effects of gender, marital status and socio-economic situation as personal bounded factors in university students' mental health. Whereas ethnicity and native or non-native variables as two personal bonded factors were not effective on their mental health

significantly. Present study was indicated the gender role on university students' mental health which depression, interpersonal sensitivity, phobia and total mental health scales were more among females than males significantly. These are congruence with earlier findings for mental health situation between university students in Iran (Behbood, 1994; Torkan, 1993; Shamlo, 1997; Qrdobadi, 1985; Milanifar, 1994) and worldwide (Stepakoff, 1998; Rosenthal & Schreiner, 2000; Grant, 2002). But alternative plausible explanation for this finding is gendered role theory that is more masculine one in country higher education and these universities. However, the effect of marital status on university students' mental health was revealed for depression only, and single students were significantly depressed than married partners. It is consistent with higher mental health among married individuals in earlier studies (Akasheh, 2000; Shamlo, 1997; Qrdobadi, 1985; Milanifar, 1994) and may addressing to buffering effects of marriage against depression occurrence (Haidari-Pahlavanian, et al., 1995). Also, the effect of socioeconomic status on university students' mental health was showed only for phobia which students with very low socioeconomic status had higher significant phobia than other groups. Here, it is a common sense based linkage between mental health and one's socioeconomic position which is congruent with earlier findings (Roberts, Golding; Towell & Weinreb, 1999; YU & Williams, 1999; Shamlo, 1997; Qrdobadi, 1985; Milanifar, 1994). However, it suggested that is reflection of students' fears, worries and vagueness in an unpredictable economical position for future, which will threat their mental health. Thus, the effects of gender, marital and socioeconomic situations are consistent with earlier findings but highlight the probable roles of regional and sub cultural factors on university students' mental health (Khodarahimi & Bait, e-Mashaal, 2001).

More fascinatingly, in consistency with second hypothesis only the type of university as a within university factor was effective on students' mental health, while dormitory and non-dormitory residence, discipline, school and faculty, and students' academic performance did not show any significant influences on their mental health. It was demonstrated the effect of university type on university students' mental health which students at Payam-Nour University—Abadeh Center had more better mental health status than their partners on Payam-Nour University—Bavanat Center and Eghlid Islamic Azad universities significantly. We agreed with Kessler, Walters and Forthofer (1998) that postulated a socio-cultural viewpoint in higher education functioning. It suggested because of various societal and cultural contexts within campuses, it may make them different for effective factors on their students' mental health. Although there is not related literature for these factors in university students' mental health, but it seems our participants were experienced similar socio-cultural backgrounds in them. However, the loss of significant effects for dormitory and non-dormitory residential location, discipline, school and academic performance as the university bounded variables on students' mental health may indicate that they have similar importance for management systems among these universities. Perhaps it shows that they operate as non-competitive campuses for student affairs and academic opportunities. Generally speaking, they try for students' admissions rather than for quality of students' services and academic enhancement. Finally, present findings indicated that both of within personal, i.e. gender, marital status and socio-economic position, and university factors, i.e. types of university, have contributions in students' mental health. Thus in congruency with Adalf, Glicksman, Demers, et al (2001), Amosshe (2001) and Kadison's (2004) emphasis on mental health crisis prevention in higher education settings, we suggest a triangle model that is based on personal, university and community factors for any successive policy in university students mental health in further investigations. Personal factors include intelligence, motivation, interests, cognitive functions, problem-solving, social skills, etc. University factors consists of management style, organizational culture, organizational stressors, planning and strategies etc. Community or socio-cultural factors involve ethnicity, language, traditions, values, norms, etc.

However to support university students, it recommends that different schools and universities provide information about university affairs, career structures and progression for them. Students should be helped to identify their interests, strengths, weaknesses and personal circumstances so that they can consider job and career options that will be appropriate and fulfilling and lead to their mental hygiene and personality actualization. In conclusion campuses should take the quality management into consideration, and give more interest to educational qualification, in-campus research based training, students affairs, scientific equipments and resources for various schools, in-service training for scientific boards, vacancy counseling for different disciplines, conflict resolution programs, and discourse approach.

References:

- Adalf, E., Glicksman, L., Demers, A., et al. (2001). The prevalence of elevated psychological distress among Canadian undergraduates: Findings from the 1998 Canadian campus survey. *Journal of American College Health*, 50, 67-72.
- AMOSSHE (2001). *Good practice guide—Responding to student mental health issues: “Duty of care” responsibilities for student services in higher education*. Winchester: Association of Managers of Student Services in Higher education.
- Akashah, G. (2000). Mental health state in Kashan medicine university students in 1996. *Andisheh Va Raftar Journal*, 4, 11-15.
- Akhavan Tafti, M. & Dehghan, N. (2006). *A study of social skills, mental health and students' academic success*. Alzahra University, Iran.
- AUCC. (1999). *Degrees of disturbance: The new agenda*. Rugby: BACP.
- Behbood. (1995). *Mental health of university students*. Shiraz University Publications.
- Brener, N. D., Hassan, S. S. & Barrios, L. C. (1999). Suicidal ideation among college students in the United States. *Journal of Consulting and Clinical Psychology*, 67, 1004-1008.
- Cyr, J. J., McKenna-Foley, J. M. & Peacock, E. (1985). Factor structure of the SCL-90-R: Is there one? *Journal of Personality Assessment*, (49), 571-578.
- Derogatis, L. R., Lipman, R. S. & Covi, L. (1973). SCL-90-R: An outpatient psychiatric rating scale-preliminary report. *Psychopharmacology Bulletin*, 9, 13-28.
- Derogatis, L. R. (1977). *SCL-90-R: Administration, scoring and procedures manual for the revised version*. Baltimore, MD: John Hopkins University, School of Medicine.
- Farjad, H. (1990). SCL-90-R application for measurement of mental disorders. *Medical Journal of Islamic Azad University*.
- Gallagher, R. (2005). *National survey of counseling center directors*. (Monograph Series, 80). National Association of Counseling Services, Inc.
- Gately, G. (2005). *Colleges target mental health*. Globe Newspaper Company. Retrieved from <http://www.boston.com>.
- Grant, A. (2002) Identifying students' concerns: Taking a whole institutional approach. In: N. Stanley & J. Manthorpe. (Eds.). *Student mental health needs: Problems and responses*. London: Jessica Kingsley.
- Haidari-Pahlavanian, A., et al. (1995). *Locus of control, depression and academic performance among students of Hamadan medical sciences university*. Hamadan Medical Sciences University.
- Kadison, R. (2004). The mental-health crisis: What colleges must do? *The Chronicle of Higher Education*.
- Kafi, S. Bolhari. J. & Peiravi, M. (1994). *Study of students' academic conditions and their mental health*. Tehran University Counseling Center Press.
- Kessler, R., Walters, E. & Forthofer, M. (1998). The social consequences of psychiatric disorders, III: Probability of marital stability. *American Journal of Psychiatry*, 155, 1092- 1096.
- Khodarahimi, S. (1995). *The conceptualization of psychological health*. Javdan- kherad Publication Inc.
- Khodarahimi, S. & Bait-e-Mashaal, B. (2001). *Mental health*. Islamic Azad University-Eghlid Branch Publications.
- Kisch, J., Leino, E. V. & Silverman, M. M. (2005). Aspects of suicidal behavior, depression, and treatment in college students: Results from the spring 2000 national college health assessment survey. *Suicide and Life—Threatening Behavior*, 35, 3-13.
- Line, N. (1978). *Foundations of social research*. McGraw Hill Inc. New York.
- Lieberman, T. (2001). *Weeklong event at Columbia University: Examines mental health*. Health Awareness Event Columbia University.
- Marashi, S. M. (1995). *The comparison of social adjustment and mental health among employed and unemployed war handicapped individuals in Ahwaz city*. (Master's thesis, Islamic Azad University—Ahwaz Branch)

- Milanifar, B. (1993). *Mental health*. Ghomes Publication Inc.
- Mousavi, V. (1993). *Study and analysis of characteristics, issues and problems of students*. Guilan University.
- Navabi-Nejad, S. (1993) Health personality characteristics among university students. *Shiraz University Journal of Humanity and Social Sciences*.
- Ordobadi, A. (1987). *Mental health of student in Islamic Azad University—Arsanjan Branch*. Islamic Azad University—Arsanjan Branch.
- Partenheimer, D. (2003). *Dramatic increases seen in college students' mental health problems over last 13 years*. APA Online.
- Roberts, R., J. Golding, T. Towell & I. Weinreb. (1999). The effects of economic circumstances on British students' mental and physical health. *Journal of American College Health*, 48, 103-110.
- Rosenthal, B. S. & Schreiner, A. C. (2000). Prevalence of psychological symptoms among undergraduate students in an ethnically diverse urban public college. *Journal of American College Health*, 49(1), 12-18.
- Stepakoff, S. (1998). Effects of sexual victimization on suicidal ideation and behavior in U.S. college women. *Suicide and Life Threatening Behavior*, 28, 107-126.
- Shamlo, S. (1996). *Psychopathology*. Roshd Publication Inc.
- Shamlo, S. (1997). *Mental health*. Rosh Publication Inc.
- Silverman, M. M., Meyer, P. M., Sloane, F., Raffel, M. & Pratt, D. M. (1997). The big ten student suicide study: A 10-year study of suicides on Midwestern university campuses. *Suicide and Life Threatening Behavior*, 27, 285-303.
- Torkan, A. (1993). *The study of depression among medical students*. Zahedan Medical Sciences University.
- U.S. Department of Education, National Center for Education Statistics. (2005). *The condition of education (NCES 2005-094)*. Washington, DC: National Center for Education Statistics.
- Yaghoobi, H. (1997). *Survey of psychological conditions of Guilan University medical students*. Guilan University Cultural and Students' Center.
- YU Y. & Williams, D. R. (1999). Socioeconomic status and mental health. In: J. Phelan & C. Aneshensel. (Eds.). *Handbook of the sociology of mental health*. New York: Kluwer Academic/Plenum, 151-166.
- Zulhizzam, A. (2005). Gender identity disorder among male university students and their features. *NCD Malaysia*, 4(3), 19-23.

(Edited by Max and Jean)